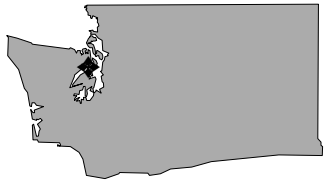
Bangor Naval Submarine Base NPL

Size: 7,001 acres
Mission: Provide support base for Trident submarines
HRS Score: 30.42 (Bangor Ordnance Disposal); placed on NPL in July 1987
55.91 (Bangor Naval Submarine Base); placed on NPL in August 1990
IAG Status: Federal Facility Agreement signed in January 1990
Contaminants: Residual TNT, RDX, Otto fuel, dinitrotoluene, benzene, PCBs, pesticides, and chlorinated organic compounds
Media Affected: Groundwater, soil, and sediment
Funding to Date: $72.7 million
Estimated Cost to Completion (Completion Year): $13.8 million (FY2008)
Final Remedy in Place or Response Complete Date for All Sites: FY2005



Silverdale, Washington

Restoration Background

From the early 1940s until it was commissioned as a submarine base in 1977, Bangor Naval Submarine Base was used to store, process, and ship munitions. Past environmental chemical releases at the installation are primarily associated with the detonation, demilitarization, and disposal of explosive ordnance and associated activities. The Navy conducted an Initial Assessment Study in FY83 to identify sites requiring further investigation because of suspected soil and groundwater contamination.

In FY90, the Navy, EPA, and the State of Washington signed a Federal Facility Agreement (FFA) for the installation. Investigation of 22 sites was recommended. These sites were grouped into eight operable units (OUs) for the Remedial Investigation and Feasibility Study (RI/FS), with a Record of Decision (ROD) required for each OU under the terms of the FFA. Between FY91 and FY97, seven RODs and five expedited response actions were taken. Based on investigations and completed actions, 17 sites require no further action. Groundwater cleanup was initiated at two sites. Three sites are under investigation because chemicals were detected in the groundwater.

The installation removed underground storage tanks (USTs) from four sites and removed drums and reconstructed a bermed area at OU7. In FY95, the installation added an eighth OU and worked to provide alternate drinking water supplies to nearby residences.

In FY96, the installation completed a Remedial Design (RD) for OU2 and an RD for soil for OU6. Remedial Actions (RAs) were started at OU2, OU6, and UST 1. The installation began long-term monitoring (LTM) at Sites 10 and 26 in OU7, signed a ROD for OU7, and developed an RD for OU7. During FY97, the installation completed the RA for soil and began an RA for groundwater at OU2. Five-year monitoring at OU3 continued. The RA for soil and groundwater and off-site disposal of soil began at OU7. The installation also began an RA at UST 4, completed an RA at OU1, implemented long-term operations and LTM at OU7, and completed the RI and operated the pump-and-treat system at OU8.

The installation completed a community relations plan in FY91 and updates it biannually. A technical review committee was formed in FY87 and was converted to a Restoration Advisory Board (RAB) in FY96.

FY98 Restoration Progress

Construction completion documents for OUs 1, 2, and 7 were submitted to EPA and Washington State. RAs were completed for OUs 6 and 7. Compliance and performance monitoring and operation and maintenance continued at OUs 1, 2, 7, and 8 and USTs 1 and 4. Five-year reviews were prepared for OUs 2 and 3. A Removal Action was completed at Camp Wesley Harris. The schedule for OU8 was expanded to explore monitored natural attenuation as a potential remedy. The RA for UST 1 was not completed because the soil confirmation samples did not meet cleanup levels. The RA construction for UST 4 is complete, and the remedy will continue to operate in FY99. Soil at all OUs met cleanup levels. OU6 was delisted from the Washington State site registry. OU1 surface water and groundwater RA objectives were reevaluated.

The installation has employed natural attenuation monitoring and three-dimensional fate-and-transport modeling that includes biological and chemical degradation of the contaminants. The RAB meets monthly.

Plan of Action

- Sign OU8 ROD in FY99
- Amend OU1 ROD in FY99
- Conduct five-year review for all OUs except OU3 in FY99
- Complete RA at UST 1 in FY99
- Complete operation of RA at UST 4 in FY00
- Investigate natural attenuation of ordnance compounds in FY00
- Complete RD for OU8 in FY00
- Complete OU8 construction in FY01
- Amend OU2 ROD in FY01

FY99 Funding by Phase and Relative Risk